

REMARKS

The examiner has rejected claims 3 and 4 under 35 U.S.C. 112, paragraph 2, as being indefinite. Applicants respectfully submit that this ground of rejection has been overcome by the instant amendment. The examiner asserts that there is insufficient antecedent basis in the claims for the term "alkyl modified groups". Applicants have amended Claims 3 and 4 to remove the word "modified". It is respectfully asserted that the 35 U.S.C. 112 rejection has been overcome by the instant amendment, and should be withdrawn.

The examiner has rejected claims 2-8 under 35 U.S.C. 102 over EP0781780 to Miyajima et al. It is respectfully urged that this ground of rejection should be withdrawn.

The present invention relates to a process for preparing a cellulose ether comprising the steps of etherifying cellulose with an etherifying agent from the group of alkylene oxides and etherifying with a C₁₂ or C₁₅₋₁₇ alkyl glycidyl ether and a sulfonate, with base catalysis to form a hydroxyalkylcellulose having on average from 0.001 to 1.0 alkyl group per anhydroglucose unit substitutions and from 0.01 to 0.1 sulfoalkyl group per anhydroglucose unit, wherein the degree of hydroxyalkylation is greater than 2.3.

The examiner is of the position that the present claims are anticipated by the teachings of EP0781780. However, it is respectfully submitted that the cited reference fails to teach every aspect of the claimed invention.

EP0781780 relates to the preparation and use of polysaccharide derivatives. All of the Examples of this reference disclose a hydroxyethylcellulose having a degree of hydroxylation of 1.8. For instance, see Example 1 at page 8, lines 15-23. In contrast, the present invention requires a degree of hydroxyalkylation which is *greater than 2.3*. The examiner asserts that the cited reference mentions a degree of substitution from 0.1 to 10. However, Applicants strongly urge that this broad range is somehow the result of

theoretical considerations and has *not* been supported by any experimental results in EP0781780. The only degree of substitution that has been experimentally supported according to this reference is 1.8.

Furthermore, EP0781780 discloses polysaccharide derivatives having a degree of substitution of sulfoalkylation which is *lower* than that required by the present invention. Indeed the examiner asserts that the cited reference mentions a degree of sulfoalkylation from 0.01 to 2.0. However, again it is urged that this broad range is somehow the result of theoretical considerations and has *not* been supported by any experimental results in EP0781780. EP0781780 discloses a degree of sulfoalkylation ranging from 0.1 to 1.0. In contrast, the present invention requires a degree of sulfoalkylation ranging from 0.01 to 0.1. While these ranges do barely meet at 0.1, Applicants urge that the useful range according to the present invention is *lower* than the useful range according to EP0781780.

Thus, since the present invention's degree of hydroxyalkylation is *higher* than the cited reference, and the inventive degree of sulfoalkylation is *lower* than the cited reference, Applicants urge that the present invention is patentably distinct from EP0781780. It is therefore respectfully urged that the 35 U.S.C. 102 rejection should be withdrawn.

The examiner has also rejected claim 1 under 35 U.S.C. 102 over EP0781780 to Miyajima et al. It is respectfully urged that this ground of rejection should be withdrawn.

Claim 1 discloses a water-soluble ionic cellulose ether comprising a hydroxyalkylcellulose having on average from 0.001 to 1.0 alkyl group per anhydroglucose unit substitutions and from 0.01 to 0.1 sulfoalkyl group per anhydroglucose unit, wherein the degree of hydroxyalkylation is greater than 2.3, made in accordance with the process of claim 7.

The examiner is of the position that the above claim is anticipated by the teachings of EP0781780. However, it is again respectfully submitted that EP0781780 fails to teach every aspect of the claimed invention.

The arguments against EP0781780 are repeated from above and apply equally here. In particular, it is urged that the present claims disclose a degree of hydroxyalkylation is *higher* than the cited reference, and the inventive degree of sulfoalkylation is *lower* than the cited reference, thus rendering the present invention patentably distinct from EP0781780.

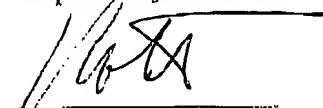
Furthermore, Applicants submit that the water-soluble ionic cellulose ether resulting from the inventive process differs from the resulting materials taught by EP0781780. In particular, it is urged the *starting material* of the present invention differs from the starting material of the cited reference. EP0781780 starts with a hydroxyethylcellulose having a degree of hydroxyalkylation of 1.8 and ends up with that degree. However, the present invention starts with a cellulose material having a *zero* degree of hydroxyalkylation and ends up, after a one step reaction, with a degree of hydroxyalkylation of 2.3 or more.

Thus, since the presently claimed process starts with a different material than EP0781780, and includes steps which differ from those taught by this cited reference, it is urged that the resulting water-soluble ionic cellulose ether of the present claims is patentably distinct from the materials resulting from the process of EP0781780. Applicants therefore respectfully urge that the 35 U.S.C. 102 rejection should be withdrawn.

The undersigned respectfully requests re-examination of this application and believes it is now in condition for allowance. Such action is requested. If the examiner believes there is any matter which prevents allowance of the present application, it is requested that the

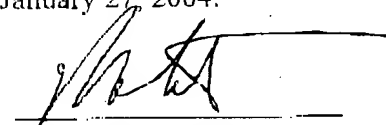
undersigned be contacted to arrange for an interview which may expedite prosecution.

Respectfully submitted,



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I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office (FAX No. 703-308-4556) on January 27, 2004.



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